THE HIGH SCHOOL JOURNAL

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EDITORIAL COMMENT

INCREASED FUNDS FOR VOCATIONAL EDUCATION

The United States Congress passed in June a new vocational measure, known as the George-Dean Act, which will provide, after July 1, 1937, more than twice the federal appropriations now available to the various states for vocational education. The new law is not only more liberal in the amounts made available to the states, but it is also more generous in the terms on which grants will be made. In the past a state or community has been required to match each dollar of federal funds by a dollar of local funds, but the new appropriation requires the local schools to provide during the first five years only half as much as the federal treasury provides. The new act provides for the first time federal funds for training young people in distributive occupations, such as would be found in wholesale and retail merchandising. In many ways the new legislation opens up wider opportunities for the public schools to provide vocational training to larger numbers of boys and girls.

This sudden expansion of the opportunities for vocational training carries with it an equal expansion of the responsibilities of those who are administering vocational education. How much of the money provided by the joint contributions of state and nation will be spent in trying to make stenographers of children who do not possess the basic characteristics that successful stenographers must have? How much will be wasted in futile efforts to train young persons to sell dry-goods, or notions, even though their personalities, abilities, and aptitudes are those of mechanics or agriculturalists? How many millions of dollars are likely to be spent training students for skilled trades and occupations that no longer exist in the production industries? Unless much more care is spent in studying the individual young persons who want vocational training, and unless those in

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charge of this training are much more careful than they have been in the past to see that the training provided is entirely appropriate for the youth who is taking it, a large part of these new funds may be spent fruitlessly.

However large the proportion of these new funds that will be wasted because of inadequate occupational diagnoses of individual students, we can be quite certain that an even larger proportion of the regular school funds of the state will be wasted for lack of such individual diagnoses. The traditional high school curriculum is clearly a pre-vocational course for the so-called "learned professions." The cheap form of education from books now so universally provided in public high schools is almost perfectly designed for preparing students of a certain academic type for the liberal arts college, which in its turn prepares those who have the right abilities for professional training. While the high school is thus reasonably well-adapted to the needs of about ten percent of the population, it is very poorly adapted to about fifty percent and absolutely unfit for another forty percent. And yet everyone in North Carolina is taxed to support this pre-professional education which a majority of those who attend high school cannot acquire or use effectively.

The answer to this situation is not to spend less money on education, but to see that the money is intelligently spent in providing each pupil with a type of training that will enable him to make better use of the particular abilities which he has. Pre-professional education and pre-vocational education are equally wasteful if inappropriate for the individual. Individual diagnosis, followed by appropriate cultural and vocational training, should be the constant program of all who are responsible for spending public funds for educating young persons.

PARROTS OR PERSONS

Campaign years seem always to disorganize the citizens of this country far more than they should. Harsh words tend to arouse bitter feelings, and these in turn lead to still more intolerant expressions and to a blindness toward all values in the platform or achievements of the opposing party. If one happens to be a Republican, he finds it impossible to see anything good in the Democratic program; and if he is a Democrat, he becomes convinced that all the misfortunes of the country were brought about by Republican mismanagement. It seems practically impossible for anyone to see the faults of his own party or the good points of the other party.

This same tendency to believe that something is either all good or all bad exists in practically every other field, as well as in politics. We ask nothing more about a person who has been labeled as a communist, a socialist, a fascist, a criminal, or an atheist. Without stopping to inquire about the factors which have influenced him, the actual facts regarding his behavior, or the motives which actuate his beliefs and activities, we throw out our chests, proclaim our own righteous Americanism, and applaud any punishment or misfortune that may come to him. Why do we not take the trouble to get acquainted with our fellow human beings and try to understand them before we condemn and attack them? Why are American citizens so easily led to believe that we are all right and that others are all wrong? Why can we not admit weaknesses in our own position and strengths in the position of the other fellows?

In primitive life, of course, fears of the unknown and of ideas that were not understood may have served useful ends, but in modern life they block intelligent thinking and progress toward desirable social achievements. Curiosity and the desire to know are the responses which would be most helpful now, but instant rejection and active opposition are still our typical reactions. We all seem to doubt the possibility that the truth, the best solution of a problem, may be somewhere between the extremes. The chance that both parties have some of the truth and that neither has all of it seems to dawn upon our minds very rarely. Is it possible that our methods of instruction in school are partly responsible for the childish fears that constantly block clear thinking?

To what extent are pupils being trained to find and to weigh the importance of the facts regarding a situation rather than to accept the teacher's or author's conclusions? To what extent are students being taught to set up standards for judging the social values of an act or of an idea rather than to accept the values someone else has placed upon it? How extensively have teachers in high schools and colleges rewarded their students for clear thinking on a problem rather than for agreement with the teacher's view and for a good memory? Have we any right to expect those who have attended our schools to think for themselves?

WHAT SHALL WE DO ABOUT SHALL—*AND* WILL?

PRESTON C. FARRAR
University of North Carolina

OF ALL the vexed questions of usage that disturb people who are disturbed about such things, perhaps none has been more troublesome than those concerning the use of *shall* and *will*. In recent years, however, the number of persons who worry at all about these forms, or rather who try to use them discriminatingly, seems to have decreased; and the question has been seriously raised whether it is worth while to teach or to try to preserve the distinction between them. This attitude was given a good deal of what looked like important support rather recently by the results of an investigation carried on by a committee of the National Council of Teachers of English. From very inadequate and poorly chosen data the spokesman of the committee drew the conclusion that *shall* and *will* are synonymous. Three of the four sentences sent out in the committee's questionnaire did not present clear-cut, uncomplicated questions of usage, and the fourth proved nothing one way or another.

In order to satisfy myself in regard to the actual practice of educated Americans in the use of *shall* and *will*, *should* and *would*, and the subjunctive mood, in clear and essential situations, I sent copies of the questionnaire given below to all the members of the faculty of the University of North Carolina. One hundred and fifty-two members out of about 200 sent in replies. While the group is small it is, I believe, fairly representative; for the members have come from all parts of the United States, have received their education in many different institutions, and are not chosen from a limited class especially interested in the English language, as are editors, linguists, authors, and teachers of English. Of course, to make the results of such an investigation conclusive, the questionnaire should be answered by many thousands of persons in all parts of the country or, if the purpose were larger, in all parts of the English-speaking world. I hope that others may be enough interested in the subject to use the questionnaire with other groups. I should especially like to see the results of its use at a New England, a Scotch, an Irish, and an English university.

Before giving the sentences used in the questionnaire, I wish to make clear the purpose I had in choosing them. I wished to find out to what extent the members of the faculty observed the usual

statements of accepted usage set forth by scholarly grammarians or writers on usage. These statements (or so-called rules), on which the writers referred to have been in general agreement for many years, are in substance as follows:

I. To express mere (or simple, or plain) futurity, *shall* should be used in the first person and will in the second and third.
II. To express the *speaker's* volition, intention, promise, threat, assurance, consent, determination, etc., *will* should be used in the first person and *shall* in the second and third.
III. In questions *shall* should be used in the first person. In the second and third persons the form should be used that is expected in the answer.
IV. In indirect quotations the *shall* or *will* of the original statement should be retained.

Roughly speaking, *should* follows the same rules as *shall*, and *would* as *will*.

THE QUESTIONNAIRE

"Will you kindly fill in the blank spaces with the words that you habitually use in your ordinary speaking and writing—not necessarily those that after mature deliberation or after consultation of authorities you might think that you ought to use. If you will answer these questions at once without discussing them with other members of the faculty, you will greatly increase the value of the study."

Fill in blanks with *will* or *shall*

1. If it doesn't rain, I.....go to town tomorrow.
2. I.....be glad to help you.
3. Since you ask me to come, I.....come.
4. .....you be annoyed if I open a window?
5. .....he be allowed to trifle with us in this way (i.e. are we going to let him)?
6. Mr. Jones says that he.....be compelled to return tomorrow.

Fill in blanks with *should* or *would*

7. I.....prefer a cup of coffee.
8. They said they.....have to decline the invitation.
9. I.....rather stay at home.
10. .....you like to go to the theatre with me?

Fill in blanks with *was* or *were*

11. If I.....you, I wouldn't do it.
12. I wish he.....here.

If the rules given above are observed, the following italicized words would be used:

1. I *will* go. Rule II, intention.
2. I *shall* be glad. Rule I, simple futurity.
3. I *will* come. Rule II, promise or consent.
4. *Shall* you be annoyed? Rule III, *shall* expected in the answer.
5. *Shall* he be allowed? Rule III, *shall not* expected in answer.
6. Mr. Jones says that he *shall* be compelled. Rule IV, *shall* retained from original statement.
7. I *should* prefer. Rule I, mere futurity; wish expressed in *prefer*, not in auxiliary.
8. They said they *should* have to decline. Rule IV, *shall* in original statement.
9. I *would* rather stay. Rule II, conditional wish or preference *Rather* merely modifies the statement.
10. *Should* you like to go? Rule III, *should* expected in answer.
11. If I *were* you. Subjunctive—condition contrary to fact.
12. I wish he *were* here. Subjunctive—wish.

Tabulation of Answers

The number choosing each form is given immediately after the form. The word called for by the rule is italicized and placed first.

1. *will*, 44; shall, 97.
2. *shall*, 84; will, 57.
3. *will*, 110; shall, 35.
4. *shall*, 15; will, 134.
5. *shall*, 104; will, 46.
6. *shall*, 32; will, 119.
7. *should*, 75; would, 75.
8. *should*, 10; would, 139.
9. *would*, 100; should, 50.
10. *should*, 8; would, 143.
11. *were*, 150; was, 0.
12. *were*, 126; was, 25.

The first thing that is to be observed in these results is that in five of the ten cases calling for future auxiliaries the rule is disregarded and in five cases is supported. Of the different rules, the first is supported in one case and given a tie vote in the other. Rule II is supported in two instances and rejected in the other. Rule III is approved for the third person but overwhelmingly rejected in two instances for the second. Rule IV is rejected by a heavy majority in both cases in which it is tested. The total vote against it is 258 to 42.

Another noticeable result of the questionnaire is the decided preference shown for *will*. According to the rules *shall* should be used in seven and *will* in three of the sentences. By the vote *will*

is preferred in six of the ten cases, and the total vote for it is 967 against 510 for *shall*, while the rules would have justified a vote of only 456 for *will* against 1064 for *shall*.

It is interesting to note in passing that in so far as we may judge from the two examples the faculty approves strongly of the use of the subjunctive in both conditions contrary to fact and wishes.

What conclusions shall we draw from the answers on the auxiliaries? A hasty glance at them might suggest almost hopeless confusion, but a more careful study shows something quite different. The answers do not indicate that their authors have no convictions or consistent habits in the use of these auxiliaries, and certainly not that they regard *shall* and *will* as synonymous. Instead, they show certain decided trends that seem to me to be very significant.

The answers to examples 4 and 10 bring out almost complete unanimity of opinion against the second part of rule III, that in second and third person questions the auxiliary should be used that is expected in the answer. In the first instance 90% and in the second instance 95% of the answers disregard the rule. I am leaving the answers to question 5 out of consideration because in that sentence *will* as well as *shall* could be used but with a different meaning from the one suggested, and because in this instance question and answer involve no change in point of view with a resulting change in person, which is the very heart of the difficulty in the other cases. That shift of person, the second person of the question becoming the first person of the answer makes the rule seem like an exception to Rule I. The faculty, whether consciously or not, applied the larger principle, the ordinary use of *will* in the second person, and made no exception in the case of questions.

Again, the answer to questions 6 and 8 show almost but not quite the same unanimity in rejecting Rule IV. Here also the rule that an indirect quotation should retain the *shall* or *will* of the original statement is an exception to Rule I, which requires the use of *will* in all ordinary third person statements. In sentence six, 79% of the answers disregard the exception, and in sentence eight 93% disregard it and apply the general rule. I am at a loss to account for the 14% difference in the two examples, for the principle involved is exactly the same in both. But the overwhelming vote, an average of 86%, against the rule is the important point. This seems to mean that persons who have not acquired this idiom by nature will not take the trouble to change the auxiliary to indicate that the thought expressed is that of another person.

Now if the answers brought out by this questionnaire are representative of the practice of educated men and women throughout the country, how ought they to affect the teaching of *will* and *shall* in the schools? The conclusion seems to me inescapable that if the great majority of educated Americans, after having been taught the two rules in question in the high schools, disregard them altogether in practice, it is utterly futile for high school teachers to continue to teach them to their pupils. And I think we are forced to this conclusion despite the fact as stated by the authors of the King's *English* that the uses under discussion come by nature to southern Englishmen, whose speech is often called standard English. They do not come by nature to the great majority of the English-speaking world.

In regard to the more general rules, the first two, the evidence of the answers is not so conclusive. In the one example (sentence 2) of the first person expressing mere futurity, the vote for *shall* is only 84 against 53 for *will*—a good majority, but nothing like unanimity; and in the corresponding example (7) calling for a choice between *should* and *would*, the vote is exactly even, 75 for each. The large vote for *will* in example 2 is hard to explain except on the supposition that the authors would use *will* in practically all cases, but this attitude is not indicated on any paper. *I will be glad* seems to mean *I intend to be glad* or *It is my will to be glad*, whereas the meaning intended is, of course, *I shall (am going to) be glad because I can't help being glad*. The even vote for *I would prefer a cup of coffee* may be due to the feeling that *should* here might mean *ought to*, as it often does. The possibility of that meaning complicates all cases where should is the natural auxiliary to use, although the meaning of *ought to* is usually indicated by a difference of emphasis. But *I would prefer* means *I should intend* or *wish to prefer* or almost *I should prefer to prefer*. That is, the idea of wish or preference is expressed in both the auxiliary and the verb.

The second part of the first rule, the use of *will* in the second and the third person, is not directly tested, as it was not meant to be; for it is the one statement on the use of these auxiliaries about which there is no question. Nobody uses *shall* for *will* in ordinary second and third person statements, unless it is a pupil trying to follow and misunderstanding Rule II, which is often inaccurately worded. By implication the answers to 4, 6, 8, and 10 show how firmly the rule is established, for in these cases it has been followed in spite of special considerations which seem to call for the other auxiliary.

The answers bearing on Rule II are inconsistent but about what might have been expected. Those on sentence 3, *Since you ask me to come, I will come,* show by a vote of more than 3 to 1 the acceptance of *will* in the first person to express consent or promise. In sentence 9, *I would rather stay at home,* the use of *would* to express a conditional preference or wish is approved by a vote of 2 to 1. The relatively large vote for *should* may be due to the confusion of this situation with that in sentence 7, *I should prefer a cup of coffee.* But in that case the wish is expressed by the verb, *prefer,* while in 9 it is in the auxiliary, *would.* The modifying adverb *rather,* which could be left out without much change of meaning, merely intensifies it.

I have left consideration of the first sentence to the last because it involves a point on which practice in this country is more confused than on any other question of *shall* or *will.* I think the results of this confusion are clearly evident in the answers to question 1. In the sentence, *If it doesn't rain, I will go to town tomorrow,* only 44 give *will,* and 97 give *shall* although the sentence clearly means that it is the speaker's *intention* to go to town. As I have never seen what seemed to me an adequate discussion of the point involved here, I should like to consider it rather fully. The applicable statement of usage given uniformly by scholarly grammarians or writers on usage during the last seventy or eighty years is that in the first person *shall* is used to express *mere* or *plain* or *simple* futurity, and almost as general is their statement that *will* is used in the first person to express volition, wish, intention, consent, promise, determination and similar acts of will. Now plain or simple or mere futurity (and one or other of these adjectives is invariably applied to the word in the statement) if it means anything at all, means nothing but futurity; that is, merely that something is going to happen. And the second statement clearly means that whenever the special ideas listed in it are intended or are added to the idea of futurity the custom has been to use *will.* This general distinction, according to Henry Bradley in the New English Dictionary, has been the rule since the middle of the seventeenth century. And the use of *will* to express a simple intention we find all the way from Chaucer's

"And at a Knight than wol I first beginne,"

to Thackeray's "I will go in and pay my respects to your wife." There are, of course, variations and exceptions which do not seriously affect the validity of the general statements.

Why, then, do we find so many educated men using *shall* in statements like that in sentence 1? The reason, I believe, is to be found in the fact that in this country usage on this point has been almost hopelessly muddled during the last fifty or sixty years by inaccurate textbooks and ignorant or inadequate teaching in elementary and high schools. Those whose memories go back fifty years or who have carefully listened to the speech of older persons or observed the record of it in newspapers and fiction will recall the fact that the auxiliary *will* was used much more in the first person by educated Americans in the middle and late 19th century than it is at present. Not only did the uneducated rarely if ever use *shall* in the first person, but people of all degrees of education, except perhaps in New England, were much more likely to use *will* than *shall* as their habitual first person form. In fact, the most frequent criticism made by persons who were particular about such matters was that others were constantly using *will* to express mere futurity, as in the sentence, "We will all be killed." This use of *will* was especially noticeable in the speeches of prominent men—congressmen, senators, and some presidents. Even Woodrow Wilson was guilty of this misuse of *will*. In the last third of the nineteenth century the attention given to English or to securing supposedly correct English in the schools noticeably increased. Along with the great growth in school population, elementary grammars and composition books multiplied rapidly. Many of the authors of these books, no doubt for the sake of greater simplicity, often stated rules of usage as briefly as possible. Some of them gave the general rule for *shall* and *will* substantially as follows: To express simple futurity use *shall* in the first person and *will* in the second and third; to express determination or promise use *will* in the first person and *shall* in the second and third. The second part of the rule is not only incomplete but misleading. Many other authors, simplifying still further, said: To express future time use *shall* in the first person; to express determination use *will*. The latter seems to be the instruction which many teachers gave and still give. In the elementary schools I was taught not to use *will* in the first person except to express determination (or strong determination). The great majority of pupils entering high schools to-day in many parts of the country will say that they have been taught the same thing. The unfortunate fact is that the superficial textbook makers and teachers I have referred to not only failed to distinguish between futurity and mere futurity and overlooked entirely the constant need we have to express intention, purpose, willingness, and

other volitions in most of our future statements, but they actually taught their pupils, in direct violation of the natural meaning and tendency of the language, to express these ideas by *shall*.

Whether it will ever be possible to undo the effects of this ignorant teaching and bring back a discriminating use of these auxiliaries in the first person I do not know. If we could induce textbook makers to revise their books and if trainers of teachers throughout the country would give their students the instruction they need and impress on them the importance of teaching these matters of usage accurately, something might be accomplished.

The distinction between the two auxiliaries in the first person is so simple it is a pity it ever became confused: let all acts of will be expressed by *will;* let nothing but futurity be expressed by *shall*. The occasions when we wish to express mere futurity in the first person are relatively few, far fewer than the occasions when some element of intention, purpose, consent, or other act of will is present in our minds. To make pupils realize this fact and grasp and apply the distinction between the forms, let us change our point of view or shift the emphasis in our statement. Instead of saying that *shall* should be used regularly in the first person to express future time except in certain circumstances, let us say that *will* should be used regularly in the first person except where there is no act of will. That is, use *shall* (or the corresponding *should*) only when the future action is outside the control of the speaker's will, or use *shall* only for what the speaker cannot help or for what he is uncertain of.

I shall be unable. I shall be glad. I shall be annoyed. I shall be twenty-one to-morrow. I shall be drowned, injured, defeated, compelled, obliged, etc. I should like, be pleased, etc. These are the relatively few uses of *shall* and *should* in the first person.

On the other hand all statements of what the speaker is going to do—that is, all except what he can't help doing—convey the idea of intention, willingness, promise, or some other act of will and should be expressed by *will*. These form the majority of future statements in the first person. Let the few, not the many, be the exceptions.

This change in the point of attack would greatly simplify the instruction to be given by the teacher. In general he might say that in all persons *will* is the ordinary way to express what the subject is going to do; *shall* expresses what he can't help doing. To make his instruction complete the teacher would have to show that the use

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1936 PLACEMENT TESTS IN FRENCH AT THE UNIVERSITY OF NORTH CAROLINA

Hugo Giduz

THIS IS the sixth annual analysis of the Placement Tests in French given at the University of North Carolina.

The results this year continue to show that a large proportion of the students coming to the university have to begin their French all over, after having had two years or more of it in high school. This analysis has been made yearly with the intention of showing teachers that there is a waste, and suggesting that they pay more attention to the fundamentals in order that their pupils who come here may be able to go on rather than repeat the work done in high school. Until this is done, students will still have to begin at the beginning as has thus far been the case for from 60% to 65% of the students from our North Carolina schools. It is a pity that not more than 35% to 40% of our students can go on into advanced work after two years of high school French.

The test used this year was the American Council Alpha French Test, Part I, Form A. This test consists of 75 words for vocabulary test and 50 items for grammar. In scoring the test it was decided that those students who made a minimum score of 60 should be placed in French 11, which is the normal course for those who have had two years of French in high school and who are capable of advancing. If the score was between 40 and 60, with a minimum of 15 in the grammar section, the student was to be placed in French 11x, and all who made below 40 were to be placed in French 1, to begin their work all over again. This arrangement was indeed fair enough. But on checking over the papers it was soon discovered that very few would be placed in French 11 if this rating was adhered to. So the score for admission to French 11 was lowered to 50, and to 35 for admission to French 11x, with a minimum of 15 on the grammar for this group. Those who made lower scores were of course put back into French 1.

As a result of this lowering of the admission score there were 40 North Carolina students instead of 22 placed in French 11. That is, 45% of the group admitted to French 11 did not achieve the score of 60. For the out-of-state students we find that 26 out of the 78 students, or 33.3% of the group made between 50 and 60.

Of the 341 students who took the test, 8 who had three or more years of French are not considered in the following tabulations. These 8 were given a special examination and placed in French 21, the sophomore literature course. This study will concern itself only with those students who were placed in French 1, the beginning course, French 11x, a six-hour-a-week course for those who need extra work in order to carry on in the advanced work, and the regular third year French, three hours a week, French 11.

Of the total 333, 157, or 47.14%, were put back into French 1; 58, or 17.47%, were put into French 11x; 118, or 35.43%, were put into French 11. In other words, only about one-third of the total number of students taking the test showed that they knew enough French to be put into the third year class. Of course by third year I mean what would correspond to third year high school French.

Separating the students who came from North Carolina schools from those who came from out-of-state schools the figures are different.

There were 189 North Carolina and 144 out-of-state students. Of the 189, 122, or 64.55%, were put back into French 1; 27, or 14.28%, were placed in French 11x, and 40, or 21.16%, on French 11. Of the 144 out-of-state students 35, or 24.30%, were put into French 1; 31, or 21.53%, in French 11x; and 78, or 54.16%, in French 11.

In tabular form these statements appear as follows:

	French 1	French 11x	French 11	Total
All students	157—47.14%	58—17.41%	118—35.43%	333
N. C. students	122—64.55%	27—14.28%	40—31.16%	189
O. S. students	35—24.30%	31—21.53%	78—54.16%	144

In other words, almost half of all the students who took the placement test were put back into French 1 to begin their study of French all over again; but of the North Carolina students almost two-thirds of them have to do this.

My study of the placement tests for the past six years has convinced me that the fault lies with the teachers as well as with the students, for with proper instruction any student who has received a passing grade in his high school French should certainly be able to make at least a score of 35 out of 125 on this test. One score was as low as 5! In many cases, as shown in my study last year (HIGH SCHOOL JOURNAL, November, 1935, Vol. XVIII, No. 7),

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The Mathematics Column

Conducted by H. F. MUNCH

(NOTE—The editor of this column has for some time felt that the readers of THE HIGH SCHOOL JOURNAL would be interested in the attitude of those in high administrative positions with regard to the purposes to be attained by the teaching of mathematics in high school and the best procedures and curriculum to use in accomplishing these purposes. It therefore gives him great pleasure to present to the readers of this column the following article written by Dr. J. Henry Highsmith of the North Carolina State Department of Public Instruction. We appreciate this article the more because we realize how busy Dr. Highsmith is and that it must have been written by him at some personal sacrifice. The mathematics teachers of North Carolina particularly should be especially glad to read this article.)

HIGH SCHOOL MATHEMATICS

J. HENRY HIGHSMITH

IT IS not my purpose to enter into any extended or exhaustive discussion of high school mathematics from a theoretical or philosophical standpoint, but to approach the subject from a practical, administrative standpoint.

The mathematics which is taught in the high school should afford that type and degree of training which will enable a person to adjust himself satisfactorily to the quantitative side of his experience. Quite clearly it is impossible to predict with a high degree of accuracy just how many and what sorts of quantitative situations a given person will face, and so we have to do the best we can in view of our finiteness and the almost infinite differences between boys and girls in the schools. If a scientific effort is made to group pupils homogeneously, even then it will be impossible to meet the needs of every one of all the children of all the people.

My notion is that the mathematics taught in the high school should be of the functional variety. I agree with all the fine statements made on pages 172-178 of our new Course of Study, (A Study in Curriculum Problems, Publication No. 189), but I am of the opinion that the mathematics curriculum has had a lot of dead wood in it, that it could and should be pruned and vitalized, and that it should be exceedingly practical.

The Course of Study as outlined on pages 172-186 provides for the following:

Eighth Grade—General Mathematics. This subject is required of all eighth grade students and is designed as a sort of orientation course. Heretofore the course in the eighth grade has been composed of arithmetic in the first semester and algebra in the second semester. The arithmetic was designed to carry over from the elementary to the high school and to give further training in this important subject. The algebra was designed as an orientation course in this subject and to prepare the student for algebra in the ninth grade, making a year and a half devoted to this subject, thereby giving the amount of algebra required for admission to most of the colleges in the State.

The course in General Mathematics will consist of intuitive geometry, some algebra, a little numerical trigonometry and, in my judgment, it should consist of so much arithmetic as may be necessary to enable a child to solve problems within his experience and within the experience of the average individual.

If I only knew just what numerical or quantitative experiences these boys and girls would have it would be quite an easy matter for me to say what the content of eighth grade mathematics should be. Since I do not know and since nobody else knows, so far as I know, we just have to do the best we can to meet the needs of boys and girls, and I trust that teachers of eighth grade mathematics will, above everything else, emphasize those elements and factors which are important and essential to most normal individuals.

A detailed statement of what should be included in general mathematics will be found on pages 179-180 of the new Course of Study.

Ninth Grade—Algebra. Algebra as taught this year should follow such algebra as may have been included in general mathematics in the eighth grade with emphasis upon those phases of algebra which are comprehensive, usable, and practical for the most of the boys and girls. To be sure, regard should be had to achievement on the part of those pupils who will go on to college. However, I very frankly confess that I am interested primarily in learning of mathematics on the part of boys and girls from the standpoint of their usual or average needs. However, those who are taking this subject as preparation for college work in mathematics should be given the most comprehensive and worthwhile course possible. I am of the opinion that ninth grade mathematics should be made an elective subject.

It is generally known that not all ninth grade pupils should be required to spend any time on algebra, and so it has been decided to offer as an alternative or elective course a course in general business training. I am under no delusions with reference to the value of this course, but I am quite sure that it would be vastly more profitable and pleasing to many boys and girls than the same amount of time spent upon algebra. My notion is that we shall be forced away from a lot of the traditional material in algebra and in other phases of mathematics as heretofore presented and insisted upon in the high school.

Tenth Grade—Plane Geometry. Plane Geometry will continue to be offered as an elective in the tenth grade. Some students should take it and some should not. Therefore it is made elective. When taught, it should be taught consistently and effectively, and maximal benefit should be sought for every student giving his time to the subject. That it has value for many people no intelligent person will deny, but that it is a hurdle and a stumbling block and unnecessary for many students likewise no intelligent person will deny.

An interesting phase of this tenth grade mathematics is a course in integrated plane and solid geometry. Such a course has been offered quite successfully in one of our best city schools and it seems to me that many of our high schools could offer such a course with advantage to everybody.

Eleventh Grade—Many of our high schools do not offer, and should not offer, any mathematics in the eleventh grade. There are so many worthwhile subjects which students should take that time is not available for mathematics in this grade. However, since many of the high school graduates will wish to enter college immediately upon graduation it seems advisable to offer a course in advanced algebra or solid geometry or trigonometry to those who wish to offer credits in these subjects in meeting requirements for admission to college. I do not mean to say that they have value only as credits for college entrance, but they are offered in most schools for this purpose mainly, and wherever it is possible such demands on the part of the students should be met.

In view of the fact that many boys and girls will not go on to school after they are graduated from the high school it seems advisable to offer commercial arithmetic. It is sometimes offered in any high school grade, but most generally it is given in the eleventh grade as the last opportunity the school will have to give such train-

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The Latin Column

Conducted by BENSON W. DAVIS

(EDITOR'S NOTE—This column aims to be so conducted that it will be of the fullest possible professional service to the Latin teachers of the state, and to all teachers who may read it. Teachers are urged to send in any question or problem pertaining to the teaching of Latin in secondary schools. Any teacher who has tried a plan that succeeded well in some phase of teaching Latin is invited to send the detailed plan to this column for publication. All questions and problems submitted will be answered in this column or in a personal letter. The following article suggests several motivation devices as possibilities for creating and maintaining interest in the study of Latin among high school students. Teachers who have tried any of the suggestions below are requested to write to this column about the results of their trial.)

MOTIVATION IN HIGH SCHOOL LATIN

SOMETIMES it is difficult to arouse interest in a given class of high school Latin pupils; it may be even more difficult to sustain and hold that interest. The teacher should have ample command of a general store of information—Roman mythology, history, literature, biography, architecture, law, engineering, daily life, customs, etc.—so that he or she may speak with a fair degree of ease and fluency about such topics, and inject suitable remarks about them into the class discussion in connection with the particular lesson at hand.

Etymology is always a fruitful and worthwhile topic, especially after the beginning pupil has learned a goodly store of Latin words. Discussion of Roman coins, weapons, arms, and ships ranks high as an interest device. Pictures of these four objects will help the students greatly in learning their Latin names, and in familiarizing themselves with quite a number of related Latin words.

The teacher may suggest that the class try to think of all possible ways in which Roman civilization has influenced our own, or, to state it another way, of what the Romans contributed to western civilization and to world progress. Some points and details in this discussion may overlap a few of the matters mentioned above, but so much the better; additional information will probably result from the repetition.

Third and fourth year pupils, and even some few of the better ones in the second year, may be conversant enough with English

literature to show definite points of Roman influence by giving illustrations from their readings. This affords another means of correlating the study of English and Latin.

Students should be encouraged to read daily and weekly papers and to be on the alert for any articles pertaining in any way to their Latin courses, and to collect advertisements containing Latin words or phrases. It will be interesting and helpful to the pupil to see whether the literal meaning of such words and phrases has a direct practical application as used in the advertisement. Some few of these are *Lux, Aqua Velva, Celotex, Mavis,* etc.

Another interesting topic is the study of Roman foods. Information about the subject is easily available in any of the books on Roman private life and customs, and in some of the new type texts. A project could be worked out in which the members of a home economics class would make a study of Roman foods, and select a typical daily menu.

Boys whose interests lie especially in scientific and technical subjects, and who may be enrolled in Latin only to satisfy an academic requirement, can be led to discover for themselves that an amazing amount of scientific terminology is of Latin origin. Many boys are deeply interested in making models of various things in their shop work or manual training classes. This affords an excellent chance to get them to make models of Roman bridges, aqueducts, temples, theaters, and houses.

Perhaps it can be safely said that most girls are quite fond of clothes, cosmetics, beauty shops, and similar things. Doubtless it will not be very difficult to stimulate a desire to read about the clothing of a Roman girl; how she dressed; how she wore her hair; what kind of shoes she had. These personal matters bring students to realize that they are studying the real language of a real, living people who walked and talked and worked and went about their everyday lives in much the same manner that modern people do.

The English and Latin departments have an opportunity of working together by selecting some of the modern books on Roman life and giving joint credit to students who read them. Such books might perhaps include *Nero,* by Arthur Weigall; *I, Claudius,* and *Claudius, the God,* by Robert Graves, and *Freedom Farewell!* by Phyllis Bentley, an historical novel centered around the life and times of Julius Caesar. Very likely it would be wise for the teacher to examine all such books before giving students access to them, and determine whether or not there could be parental objection to the pupils' reading them.

The Science Column

Conducted by CARLETON E. PRESTON

WHAT? OR, HOW?

TIME WAS when very many science teachers, judged by their eulogies of the subjects they taught, were wont to assume that merely to bring students to an understanding of the major facts and principles of science was sufficient to develop in them, at the same time, those habits of accurate observation and, still more, of keen-minded interpretation and sound judgment that are not only characteristic of the scientist at his best, but also generally essential to independence of thought and to intelligent citizenship under a democratic form of government. It is perhaps not stretching the truth to say that teachers can still be found today whose work is actuated by the feeling, either latent or openly recognized, that the sciences possess inherently some such mysterious power.

It would seem worth while to consider briefly some of the causes which have led up to this mental attitude, together with some of the effects which it has produced in teaching practices. For such can scarcely be said to be the belief of progressive science teachers today. More and more these have come to realize that, fine as is the mere understanding of facts and principles, what counts still more is the acquiring, in addition, of the habit of applying these facts and principles intelligently in daily life. Valuable beyond these, too, is the habit of investigating, in the careful manner of the scientist, all sorts of problematic situations met in life, and the ability to reach, through safeguarded thinking, tested conclusions or generalizations concerning them that may serve as guides for subsequent action. It is furthermore important that this ability, and this habit, be extended to function beyond the realm of the natural sciences, for many of our most pressing problems today lie in social and economic fields. The development of all these qualities, it is now realized, depends not chiefly upon the subject matter, but upon the treatment accorded to it by the teacher.

Science teaching, historically, has grown downward through the schools rather than upward. Starting with small graduate univer-

sity groups, in which each student, under the guidance of some master in the field, and through investigation of some individual problem, acquired for himself these habits and abilities, it was next offered to undergraduates, and later passed down into the secondary schools. But then, since standardization and simplification of content became apparently needful for administrative purposes, the tendency was to remove it farther and farther from this original goal—to make it more stereotyped and more formal. Laboratory work came to be measured less in terms of student growth in powers of thought, and more in terms of time and quantity units. Manuals, laying the steps of the work out in detail in order to bring the exercises within the supposed difficulty range of the secondary school student and to furnish relief and guidance to teachers, concentrated on "standard" ground-covering and the securing of quantitative answers within an acceptable percent of error from those more precisely determined. The importance of understanding the significance of the work done and of the processes involved, looked upon as a factor in pupil development, was overshadowed by the importance of remembering subject matter in and for itself.

Today we are beginning to realize more and more that the emphasis should be the other way round. This does not mean, of course, that we should ignore the value of scientific knowledge expressed in terms of facts and principles, but that we should lay the greater stress upon gaining the ability both to achieve and to use such knowledge independently. In other words, we have come to appreciate the need of cultivating in our students the *mental habits* of the scientist as greater than that of passing on to them the *accumulated knowledge* now possessed by scientists.

Suppose we consider a simple, specific case. A commonly given experiment introductory to physics is to measure the length of a table along one edge, using an ordinary meter stick. Generally the direction given is merely to take the average of several measurements. Here is how it is sometimes performed: The student, not in the least knowing why the length of that table top should be of interest to him or to anybody else present, does his work only because he is told that he must. He starts each measurement exactly like all the others, using the zero end of the meter stick against the end of the table, averages his results, which he expects will vary exceedingly little, and reports to the teacher, probably rebelling inwardly at having to waste time on such a foolish piece of work. The teacher, in turn, takes up the meter stick, measures the table *once,*

looks at the student's written record to see that the answer is reasonably like his own, makes his classbook entry or stamps the paper, and the experiment is over. Directions have been followed; a requirement has been met.

Some readers may think this description an overdrawn caricature; unfortunately it represents, in spirit, the sort of thing going on in many laboratories, not all below college level, even today, so far as absence of real learning is concerned. The only possible educational outcome of doing the experiment in this fashion, except as perhaps one or two abler students discover others independently, would be greater familiarity with the use of a meter stick and with the metric table of length.

Let us now analyze the possibilities of this experiment as an aid to better thinking. Supose that at the start we give the student the idea that the length of the table is of little consequence, but that what we are really interested in is the process by which the scientist seeks to get as accurate measurements as possible with the instruments at hand. There are chances for error in making a single measurement; how many such chances can we find? (Errors due to sighting, to rounded table edge, to inequalities in meter scale, to breadth of lines on scale, to misreading of numbers, to confusing unit designations, to wrong addition, to poor judgment in interpolation, etc.) It will be interesting to see how long the list of chances is, and how many possibilities of error we can discover. In what ways can we minimize the effects of such errors? What would be the effect of starting each measurement at a different point on the meter stick? Of using different meter sticks? Of taking a larger number of readings to be averaged? Of having different competent persons take these measurements?

Taken as a whole, what does this experiment teach us about good practices in securing data? Is basing judgment on the average of a number of cases rather than on a single case a desirable practice in other fields than that of measuring such qualities as length, volume, or weight? How important is it for the average person, in dealing with his own particular problems, to be on his guard against possible sources of error in his calculations? Other questions of similar sort might be asked, and discussed by a class well directed. At the end, definite generalizations are possible which can well become a part of every student's mental working capital for the duration of his life. Furthermore, at every step of the way, the significance of

the experiment has been made clear, assuring his better co-operation in its performance.

Now, such teaching, if practised consistently and continually, is very time-consuming. What it really is doing is training students to get the facts for themselves and to do their own generalizing from them, in place of handing out similar generalizations predigested. Included in such training is, of course, that of fact-finding from books as well as through experiments; but throughout, the emphasis is on the process of learning and of using what is learned, not on the mere storing of information. Naturally, in proportion as the student becomes adept, his rate of work, including that of knowledge accumulation, increases; but in secondary school years lack of maturity combines with lack of time in limiting the progress made.

Science teachers, then, are today faced with a very serious problem—the problem of deciding whether to sacrifice the presentation of a well-rounded survey of a science field, such as most of us have been trying to give, to the time demands of a type of teaching such as has just been described, in which content must be largely incidental and fragmentary. There is surely not time to do credit to both types. Up to now, say what we will to the contrary, our emphasis has been on content first; our courses have been determined by syllabi, workbooks, and texts all laid out on a content basis; and college entrance or other final examinations have been fundamentally of content type. Those of us who have felt that somehow our students were not in this way getting that training for life that we have deemed that they should have, even though they may have learned the anatomy of the frog and been able to repeat Newton's laws of motion, have in varying degrees attempted to turn our steps in the direction indicated in this article. But we have been in the position of trying to serve two masters at once, with the result of serving neither well.

To put the question in another way, are we coming to the time when the able science teacher must find it best to put syllabi and other extraneous course determiners aside and, keeping in view the one goal of developing intellectual independence in his students, to follow a new and hitherto uncharted course toward it, using the content of science as his special medium of instruction, but without regard to its well-rounded presentation as a body of knowledge?

Indications are that such a movement is now definitely under way. Needless to say, whatever the change that takes place, it

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The History Column

Conducted by A. K. KING

WORKBOOKS IN THE SOCIAL SCIENCES

SO MANY inquiries about workbooks have been made that we are devoting our column this month to a discussion of the various teaching devices which come within this classification.

Workbook is a generic term including a multitude of drill books, self-testing manuals, laboratory manuals, syllabuses, and study guides. These cover almost every subject or activity engaged in by pupils from the first grade through the junior college. Such a deluge of this material has issued from the presses of the land in the last decade that it has been impossible for any person to keep up with it. In fact, workbooks in the social sciences have appeared so rapidly that the teacher could spend all of her spare time examining them. The movement is so new that it is difficult to determine yet whether it is one of those periodic educational fads which sweep through the schools or whether it is a permanent improvement.

It is probable that the workbook is an outgrowth of several different educational practices of both the "formal" and "progressive" varieties. The syllabus or outline for a course has long been with us. The same is true of the laboratory manual for courses in natural science. These were frankly devices for imparting subject matter, usually formal in content and conservative in organization.

One of the aims of progressive educational theory has been to adapt the subject matter to the individual child and to attempt to avoid dealing with children in the mass. This movement has given impetus to supervised study, to laboratory methods in subjects other than natural science, and to a wide variety of individualized techniques which are supposed to expand or contract in accordance with the needs of each child. The overworked classroom teacher, frequently confused by conflicting philosophies and psychologies of education, has been eager for concrete plans that purported to apply the new theories. These plans needed to be as objective as possible in order to save time in checking the work of pupils. At this point they received support from the objective testing movement. Hence, the new workbooks were filled with true-false, multiple choice,

completion, and identification stereotypes. These were sometimes divided into three batteries for each topic or unit and designated as diagnostic, teaching, and final tests. The purpose of the workbook in this stage of development purports to be efficiency. Pupils have something definite to do; they work at their own rate of speed; and the teacher can check their work with a minimum of effort. Whether this purpose is actually achieved is of little significance beside the larger question of the worthwhileness of what is actually done.

Let us examine the workbook and how it is used with special reference to the social sciences. After all, workbooks are nothing more than inexpensive textbooks with the emphasis on pupil activities rather than on informational content. The test of the workbook then should be on the basis of the worthwhileness of the activities suggested. In addition, it should be noted that since they are textbooks they are subject to all the limitations and possible abuses of the ordinary textbook.

In general workbooks may be divided into two broad types. In one the drill element is uppermost; in the other a set of study guides is provided. The drill book is frequently based specifically on some textbook and follows its organization chapter by chapter. It is designed to focus the attention of the pupil on specific items of information for the purpose of making them automatic. Ordinarily there are pages of blanks to be filled in after reading the text. Sometimes so-called thought questions are introduced with the monotonous blank for the product of the pupil's thought processes. Frequently, the obvious is glorified by such exercises as, "List ten persons in your community upon whom you depend for services."

There are some courses in which the specific drill element is very important. In these courses drill books may have a legitimate and useful place. However, are these activities worth while in the social sciences? In history we want pupils to develop a sense of time, not to memorize a list of dates. We want them not only to know the names of the great persons of the past but to know why they were significant. It is not enough for them to memorize facts; they should demand proof of the authenticity of those facts. In civics we would like for them to know how government actually functions rather than to memorize the structure of it. Equally illuminating examples could be cited from the other social sciences. They all possess a rich and significant content, a content that must be understood if it is to be learned. The only way to understand this content is to study it in meaningful situations that are on the comprehension level of the

pupil. Viewed in this light the drill type of workbook in the social studies is antagonistic to all the goals of progressive education. It is the epitome of reaction and leads only to verbalism. The latter has always been the greatest weakness of teaching methods from ancient China to modern America.

The study guide type of workbooks cannot be evaluated as a group, but each must be considered individually and in the light of the specific situation in which it is to be used. The better study guides are a modernization of the syllabus idea. They provide the teacher with a systematically planned course of study and a ready-made set of assignments. One usually finds in social science workbooks of this type that the field is divided into from eight to twelve large units. Each of these is frequently divided into a number of assignments containing an outline, specific page references to a variety of books, and basic activities for all the pupils. In addition, often there are suggested supplementary activities containing oral reports, interesting reading, map work, themes, investigations, and construction projects to be adapted to the individuals in the class. If a scheme of this kind is based on a good organization and is adapted to the situation in a specific school it has some arguments in its favor. These arguments are chiefly those in favor of any ordinary textbooks. They provide a common organization which is in the hands of all; systematic and definite assignments are possible; the teacher is relieved of the task of planning lessons; and they make inexperienced teaching possible. The last is the most plausible argument in favor of study guides. A constant stream of new teachers, perhaps one out of every five, is pouring into the schools annually. Unless the textbook is generously supplied with teaching aids a workbook in the hands of a beginner may be better than nothing at all.

In the final analysis it is doubtful whether even the most intelligently conceived workbook is in full harmony with progressive educational theories. They are general in nature and are not constructed with the needs of a specific community or a specific group of pupils in view. If followed systematically they may lead to the empty formalism of recitation-testing. They are likely to be hampering to the good teacher, or they may even impede the professional growth of the teacher.

If study guides are to be used they should be an outgrowth of the experience of the teachers in the system in which they are

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The Physical Education Column

Conducted by OLIVER K. CORNWELL

IN THE field of physical education it seems there are three well defined points of view relative to methods of teaching. The first is a passive acceptance of traditional methods without inquiry as to their validity or fitness for particular situations. The second is of a higher and more progressive type because it is at least critical. A logical study is made of the learning process and there is an attempt made to build up an organization of method which is sound as judged by adult introspection and reasoning. The chief defect lies in the fact that the student himself supplies no data. The whole plan may be evolved without any reference to the learning process of the student. The third point of view is primarily psychological. It does not invent a method based on abstract theory, but undertakes to develop one through scientific observation of students. This point of view is experimental. All methods are tested and are accepted tentatively until they are proved sound by actual practice. They are gladly surrendered when better methods are discovered. The improvement of method has come as the result of increased knowledge of human nature and institutions.

In physical education, as in all other fields, *interest* is a dominant factor. Learning should be self-initiated. The task which is imposed on the learner when he is not aware of its value or need, must struggle against one or more competing interests. The learner may go through the routine of drill without complaint and yet find little if any progress or satisfaction in doing so. It has been believed that some mystical value is given to the individual as the result of the experience. In physical education the teacher can plan the task and at the same time skillfully lead the student to conceive of it as his own and to give his full assent to it. The sense of personal responsibility should persist through all phases of the undertaking. Thus, effort, as the result of interest, leads to the development of lasting skill.

Interest should be regarded in physical education as the means of securing the development of certain abilities. It is apparent that the student who repeatedly approaches a task with a certain mind-set

or attitude is becoming habituated in this attitude. The student who enjoys the work is on the way to effective learning. In the same way, ideals of leadership, social co-operation, and integrity may be fostered or discouraged by relations with the teacher or with fellow pupils. Abiding interests in certain types of subject matter, and particularly in physical education, are the outcome of well conducted programs of education.

It is recognized that *attitudes* are the chief sources of the aims, goals, standards, and values of life. They furnish much of the driving force which enables individuals to achieve success. All attitudes function in the integration of experience. There are many general and specific attitudes that are direct outcomes of participation in games or play situations. They may be temporary or permanent in character. Some mind-sets or attitudes are due to native tendencies, others are the result of previous experiences. Individuals often have several mind-sets or attitudes. One may be used at home, another in the class room, and still another on the athletic field. No place in the school program exerts as strong an influence on the development of attitudes as the athletic field and gymnasium.

Attitudes are essential to the development of character and personality. A large group has been classified by Dr. W. W. Charters in *The Commonwealth Teacher-Training Study* such as interests, enthusiasm, prejudices, and the like. The direction which these attitudes take largely determines happiness, health, and success. It has been stated that learning in physical education is influenced by many factors. Attitudes are among the most important of these factors. When the attitudes are very definite, directed and motivated by the goal idea they are called *purpose*. They then exercise a stimulating effect upon the rate of learning and of progress in school and college. The efficiency of work from day to day and the rapidity with which habits are acquired are influenced by the attitude of the learner.

The student learns most economically if he keeps his method of procedure under conscious direction. He does not trust to chance. He analyzes, compares, generalizes, verifies, and applies. He is critical of his own procedure and is always ready to change old procedures for new when they give greater promise. It is this attitude of intense effort and openmindedness that facilitates learning.

An *ideal* is a composite of the things previously mentioned and is sometimes described as a master idea which determines large patterns of conduct. When ideas are made goals worthy of being striven to-

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NOTES FROM THE FIELD

Reported by A. B. Combs, Division of Instructional Service, State Department of Public Instruction, Raleigh, N. C.

During the session 1935-36 we reported in this column items which we thought would be of interest to high school people in the State. Good practices which came to our attention were reported briefly as a matter of information and in order to stimulate better practices in the schools. During the present session we shall continue to make brief reports as to activities in the Department of Public Instruction and in the field and shall appreciate having our attention called to activities which should be reported from any point in the state.

Sixteen high schools for white children and thirteen for Negro children were added to the list of accredited schools at the close of the session 1935-36. They were as follows:

WHITE

County	*School*	*Rating*
Bladen	Kelly	II-B
Craven	Ft. Barnwell	II-B
Davidson	J. O. U. A. M. Orph.	II-B
Iredell	Central	II-B
Jones	Comfort	II-B
Lenoir	Pink Hill	II-B
Northampton	Gaston	II-B
Randolph	Staley	II-B
Rutherford	Lake Lure	II-B
Stanly	Aquadale	II-B
Stanly	Endy	II-B
Yadkin	West Yadkin	II-B
City		*Rating*
Winston-Salem	North	I-A
Winston-Salem	South	I-AA
Raleigh	Methodist Orph.	II-B
Private		*Rating*
Fletcher	Asheville Agricultural School	I-B

NEGRO

County	*School*	*Rating*
Bladen	Clarkton	II-B
Catawba	Newton	II-B
Chatham	Pittsboro	II-B
Cleveland	Lawndale	II-B
Columbus	Chadbourn	II-B
Columbus	Farmers Union	II-B
Cumberland	Eastover	II-B
Gaston	Bessemer City	II-B

Halifax	Scotland Neck	II-B
Pamlico	Bayboro	II-B
Richmond	Ellerbe	II-B
Rutherford	Rutherfordton	II-B
Wake	Wake Forest	II-B

We are submitting below a statistical summary for the white high schools of the State for the session 1935-36, compiled from the annual reports submitted by the high school principals. We are making no comments, except to say that the total enrollment shows an increase of approximately 8,000 over 1934-35 and the average daily attendance an increase of about 6,000.

WHITE PUBLIC SCHOOLS—1935-36

	RURAL			CITY			TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Number of Schools			639			89			728
Accredited			605			89			694
I-AA						19			19
I-A			2			7			9
I-B						1			1
II-A			484			61			545
II-B			119			1			120
Unaccredited			34						34
III-A			4						4
III-B			21						21
III-C			9						9
Number of Teachers	1,661	1,764	3,425	387	1,039	1,426	2,048	2,803	4,851
Enrollment	43,915	51,864	95,779	21,056	22,831	43,887	64,971	74,695	139,666
In Unaccredited Schools	915	1,079	1,994				915	1,079	1,994
Average Daily Attendance	36,985	45,616	82,601	18,164	20,363	38,527	55,149	65,979	121,128
*Per Cent in Attendance	84.2	88.0	86.2	86.2	89.2	87.7	84.9	88.0	86.7
ENROLLMENT:									
First Year	16,232	17,673	33,905	7,171	7,328	14,499	23,403	25,001	48,404
Second Year	11,836	13,996	25,832	5,609	6,120	11,729	17,445	20,116	37,561
Third Year	9,017	11,220	20,237	4,413	4,975	9,388	13,430	16,195	29,625
Fourth Year	6,830	8,975	15,805	3,532	4,035	7,567	10,362	13,010	23,372
Twelfth Grade				331	373	704	331	373	704
AVERAGE DAILY ATTEND.:									
First Year	13,264	15,160	28,424	6,099	6,511	12,610	19,363	21,671	41,034
Second Year	9,957	12,343	22,300	4,856	5,472	10,328	14,813	17,815	32,628
Third Year	7,710	9,926	17,636	3,856	4,469	8,325	11,566	14,395	25,961
Fourth Year	6,054	8,187	14,241	3,065	3,577	6,642	9,119	11,764	20,883
Twelfth Grade				288	334	622	288	334	622
Graduates	5,401	8,004	13,405	2,390	3,197	5,587	7,791	11,201	18,992

NOTE: There were 8 schools, not classed as high schools, doing high school work. They employed 9 teachers and enrolled 107 pupils.
The following State Institutions were not included in the totals: The State School for the Blind and Samarcand Manor. These employed 7 teachers and enrolled 41 pupils.

*Based on total enrollment, codes a, c, and d. These figures would be higher if based on average daily membership.

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NEWS NOTES

High School Principals Organize

A small committee of high school principals took the responsibility of calling together all those high school principals interested in an organization. This meeting was held in Greensboro on Friday, October 2nd. The purpose was to discuss various secondary problems and to effect an organization which would be continuous and which would offer a means of expression to this large group of school leaders. Approximately 40 principals, representing many sections of the state, responded to the call. The program was presented at the Senior High School in Greensboro and consisted of the following topics:

Student Government Work in the High School
Mr. I. E. Ready, Rocky Mount, N. C.
School Publicity
Mr. Claude R. Joyner, Winston-Salem, N. C.
The Civic Responsibility of a High School Principal
Mr. William Henry Shaw, Raleigh, N. C.
Part of the High School in the Social Life of a Student
Mr. Frank L. Ashley, Gastonia, N. C.
The Part-Time Schedule
Mr. Vernon Briggs, Reidsville, N. C.
Returning to Standard School Rating
Mr. H. Grady Owens, High Point, N. C.

Following the discussion a business meeting was held at which time officers were elected. A. P. Routh of Greensboro, was elected President, P. A. Reid of Roanoke Rapids, Vice-President, Frank L. Ashley of Gastonia, Secretary-Treasurer.

These officers were authorized to select a time and a place for the next meeting with the general suggestion that it should be held sometime after the first of the year. The officials of the University of North Carolina extended an invitation to the group to meet at Chapel Hill for the next session. This invitation was favorably received, but was left with the officers for decision. This organization is to be more inclusive than the old AA voluntary group which has rendered a very definite service to secondary education.

It was pointed out that the principal is the key to the professional development of the teacher. This position offers the most direct means for the improvement of instruction. The group expressed a feeling that higher standards should be set up for the work of the

principal and that a corresponding recognition for this work should be secured. It was thought that in order to do this all high school principals of the state should unite. Enthusiasm prevailed throughout the entire conference. All high school principals are being urged to take part in this new opportunity for further study of secondary problems and for complete unity throughout the ranks of principals.

G. B. PHILLIPS.

CENTENNIAL CELEBRATION CONTESTS

The July number of the University of North Carolina Extension Bulletin contains the announcement of Centennial Celebration of Public Education in North Carolina contests and awards. The committee has adopted the policy of placing little emphasis upon prizes, feeling that the honor of participation and winning should be sufficient reward for the effort expended. However, the official emblem of the Celebration has been adopted in a beautiful key design as the means of rewarding successful contestants.

The contests include essays on various phases of education (two groups: high school pupils and members of P. T. A. bodies); scrapbooks illustrative of the development of education in North Carolina (elementary school pupils); posters, educational (elementary school pupils); declamation (elementary school); graphic and plastic arts (several types of contest for junior and senior high schools); playwriting (open to any resident of North Carolina); poetry (children, adults); musical composition (open to any resident of North Carolina).

There is some variation in dates at which the several contests close, but in general local selections have to be made by January 15, 1937, and selections from larger areas by February 22. The chairman of the contest committee is Mr. R. M. Grumman, Chapel Hill, from whom further details and copies of the Bulletin may be secured.

THE FIFTEENTH ANNUAL COACHING SCHOOL

Ninety-nine coaches and athletic directors attended the University of North Carolina's fifteenth annual coaching school, which was held at Chapel Hill during the period August 17-29, 1936. This number was the largest ever to attend an annual coaching school at Chapel Hill.

Instruction was given in the coaching of football, basketball, baseball, track, boxing and wrestling, and in athletic training and conditioning.

Robert A. Fetzer, director of athletics at the University of North Carolina, served as director of the school. The members of the University's regular coaching staff acted as instructor. The staff of instruction of the school included Mr. Fetzer, Raymond Wolf, Walter Skidmore, P. H. Quinlan, Bunn Hearn, William Lange, G. E. Shepard, M. D. Ranson, and John Vaught. E. R. Rankin, of the University Extension Division, was secretary of the school.

Of the 99 members of this year's school, 44 came from North Carolina and 55 from other States. The following 12 States were represented: North Carolina, Virginia, South Carolina, Georgia, Florida, West Virginia, Tennessee, Mississippi, Maryland, Pennsylvania, New York, and New Jersey.

At the conclusion of the school, certificates were awarded by Director Fetzer to 19 men. Under the plan of operation of the school, certificates are awarded to those who attend the school for two years and who carry as many as four full courses during the two-year period.

Since the annual coaching school was established in 1922, the number of men to attend for one or more years has been 825. Many of these have attended several sessions.

The dates which have been selected for the 1937 coaching school are August 16-28.

WHAT SHALL WE DO ABOUT *SHALL*—AND *WILL?*

(Continued from Page 237)

of *shall* is more limited in the second and third persons than in the first. But pupils have no difficulty with the second and third persons, largely because the same form, *will*, is used to express both simple futurity and the intention of the subject. The change suggested would also, I think, rid instruction on these forms of quite useless hair-splitting distinctions. Grammar after grammar that I have examined presents the two sentences (or similar ones), *I shall go to town* and *I will go to town*, and tries to show a fine distinction between them when in fact, unless the *will* in the second sentence is emphasized or unless we assume that in the first the speaker expects to be taken to town against his will, the same meaning is intended in both. We cannot get rid of the idea of intention in the first sentence, and we should greatly simplify the whole problem of teaching the use of these forms to children if we could all say what we mean and use *will* instead of *shall*. Moreover we should have the satisfaction of knowing that we were working with, not against, the natural tend-

ency of the language in more than three-fourths of the English-speaking world.

I wish to thank the members of the faculty for the trouble they took in answering the questionnaire and for many interesting comments that they added to their answers.

1936 PLACEMENT TESTS IN FRENCH AT THE UNIVERSITY OF NORTH CAROLINA

(Continued from Page 239)

students had received very high grades in high school, only to fail miserably on the test.

Any student who has mastered the veriest fundamentals of the first two years of French will have no difficulty in making a satisfactory score. Teachers should spend more time in the fundamental principles of grammar and on building up a minimum essential vocabulary. If teachers used standardized tests more often in their high school work they would be likely to make a fairer estimate of their pupils' work. They would not pass any who did not measure up to the norms for these tests. Then when the students come to the university they would find that their two years of study in high school had not been wasted.

THE MATHEMATICS COLUMN

(Continued from Page 242)

ing as boys and girls may need in certain general business relationships after they leave school. It has value for many boys and girls, and should be treated as indicated in the Course of Study in Business Education recently published by the State Department of Public Instruction.

While not regarded as mathematics the course in Business Education will emphasize many features of mathematics, particularly the practical aspects of arithmetic. Such courses will contribute decidedly to the acquisition of ability on the part of pupils to adjust themselves intelligently to many of the quantitative aspects of life.

So, summarizing, let me say that the whole purpose in whatever mathematics is offered in the high school should be to equip boys and girls for the realization of those objectives which are generally recognized as being worthwhile for boys and girls as citizens of a democratic commonwealth which is aiming to give somewhat adequate educational opportunities to all those citizens.

THE SCIENCE COLUMN

(Continued from Page 248)

is better that it should come through evolution than through revolution. After all, the time-honored school method of study through textbooks, covering a particular subject during a given period, is not followed generally in life after school years are over; instead, one gleans ideas here and there, and fits them, by oneself, into one's own composite picture or philosophy of life, which continues to change as the years go by.

This article does not pretend to answer the question it raises. Rather, it is intended to challenge thought and lead to discussion. In the mind of its author, the question is the most fundamental one that faces science teachers at the present time.

THE HISTORY COLUMN

(Continued from Page 251)

to be used. Then they can take into account the needs of the community, the background of the pupils, and all the available equipment. They can be mimeographed with little expense and revised as often as necessary. In this way the teachers will be growing professionally through engaging in a constant program of course of study revision, and the pupils will also be given an opportunity to make their contribution.

THE PHYSICAL EDUCATION COLUMN

(Continued from Page 253)

ward, or a standard of valuation for determining conduct, they have the characteristics of an ideal. Ideals develop out of experience. They develop slowly and are associated with a large number of separate experiences. That agency when properly controlled and directed which plays such an important part in the development of ideals is physical education, since no place in the school program provides opportunity for practice in a greater variety of settings.

The driving and directing force of ideals may be easily observed. The explanation of the drive of an ideal is to be found in man's ability to see relationship and to anticipate the future. Ideals may be described in the terms of their characteristics as honesty, trustworthiness, loyalty, plus an impulse to act in the characteristic way when an appropriate situation is provided. Games offer a great variety of such situations.

The ultimate aim of education is to develop the ability to think clearly, logically, and constructively for the solution of definite problems; to organize past experiences and to work in search of knowledge with an open mind, without prejudice, to the end that man may adjust himself to his environment and to his fellow man and help provide for their improvement. I submit physical education as a very necessary part of man's equipment in attempting to accomplish the ultimate aim of education.

NOTES FROM THE FIELD

(Continued from Page 255)

The members of the Division of Instructional Service completed in September the last of a series of conferences with superintendents and principals which touch every county in the state. The purposes of the conferences were three-fold—to discuss the new course of study, to assist in outlining a program of professional study for the year, and to carry information concerning organization to the principals. The conferences were well attended and helpful to both principals and members of the Department.

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We have called attention in this column to county handbooks or manuals of information which are issued to teachers in a number of counties at the beginning of the year. We find that these are usually appreciated by teachers because they give a definiteness to the program for the year. Two such manuals for the session 1936-37 have come to our attention—those for Columbus and Swain counties. The Swain County Manual contains in addition to the calendar and information about routine matters a long-time program for educational development in Swain County and material to stimulate professional growth on the part of teachers.

BOOK REVIEWS

An Examination of Examinations. SIR PHILIP HARTOG and E. C. RHODES. Macmillan & Company. Pp. 81. One shilling, 1935.

This report is an abbreviated account of a very extended investigation of the reliability of marks given on written and oral examinations in England. Copies of papers actually written under the ordinary conditions of the examination were secured from among the:

a. *School Certificate Examinations* taken at the age of 16.
b. *Special Place Examinations,* usually held between the ages of 10 and 12.
c. *A College Scholarship Examination.*
d. *A University Honours Examination* in Mathematics.
e. *A University Honours Examination* in History.

All marks received in the original correction were removed and the papers submitted to trained examiners who were employed for the purpose. Then, too, some papers were corrected a second time by the same examiners after a year had elapsed. In all these cases great variations in markings were shown. For example, when the same 15 papers were marked the second time by the same 14 examiners: "It was found that in 92 cases out of the 210 the individual examiners gave a different verdict on the second occasion from the verdict awarded in the first." In one board of seven examiners, the members of the board agreed upon minute details for scoring the papers (here French). But even here "The number of Failures varied from 6 to 15, of Passes from 7 to 16, of Credits from 21 to 30, and of Distinctions from 1 to 9." Furthermore two examining boards disagreed substantially on marks to give the same paper.

The same story is repeated in the case of examinations in the University level where the examiners are learned doctors.

We have before us, then, a thoroughgoing examination of the present methods of giving marks to papers when objective tests are not used. The investigation was financed by the Carnegie Corporation and participated in by the leading men in these fields in all England and Scotland. The work was done with the greatest care and yet the results were almost in complete agreement that examination marks are highly unreliable, that the score an examinee receives depends almost as much upon the examiner which chance gives him as upon the material which he writes. As proof of this last state-

ment I will cite the case in which two English papers representing five hours of writing were scored by seven examiners, "who had the reputation of being specially experienced and trusted examiners." Out of the sixty-eight papers one examiner failed 19; another, none. The next highest mark was "Pass". One examiner gave 30 of these marks, another 2. The highest mark given was "special credit". One examiner gave 12 papers special credit; another, not one.

A. M. JORDAN.

Adolescence. LAWRENCE AUGUSTUS AVERILL. Houghton Mifflin Co. Pp. vii + 496. Price $2.25.

The use of the case method of presentation sets Averill's work apart from the many other books in this field. During his fifteen years of teaching, Averill had required case work of each of his students, because he felt that the most important facts yet ascertained in relation to adolescence have been found by this method. Although he realizes the danger of inaccuracy in work done by immature workers, nevertheless after they have had a period of rigid training Averill accepts their reports, because these students have, themselves, not long since, passed through adolescence and have therefore a sympathetic point of view. These case studies he feels to be of sufficient accuracy to be used as illustrative material.

Every chapter is opened with four or five of these reports, each illustrating one of the topics discussed. Following these, each topic is illustrated by one or more of these cases, and oftentimes this makes up the chief presentation of that topic—discussion being very brief. This form of treatment increases the value of the book in several ways. It holds the reader's interest; it presents first-hand material toward the establishment of the point; and leaves the reader unusually free to draw his own conclusions. The second form of distinction in Averill's method of presentation is his making many topics, which other writers develop as major theses, subservient to the larger topic of the chapter, presenting these subservient topics in different lights in each chapter. For example, in nine out of fourteen chapters the home is discussed in whatever relation the author considers it to have to the topic of that particular chapter.

The contents of Averill's book include chapters on the approach to adolescence (two chapters); the relation of parents (three chapters); the relation of school and of the community (two chapters); adolescence (three chapters); the ideals, morals, religion, sex attitudes; and (one chapter) the history, literature, biography and human achievement of youths.

The author's treatment of the material of his book is more sociological than psychological. He presents it as the effect of the outside world on the youth, and not as an analysis of the mental reactions of the youth himself to the situations by which he finds himself confronted. Thus Averill gives relatively small space to physical symptoms, to growth, etc., and to mental measurements.

The chief disadvantage of Averill's work is the lack of logical chapter-arrangement. This makes a separate entity of each chapter and destroys the continuity of thought of the work as a whole. His method has, however, certain advantages. His style, which is clear, is not too technical, nor yet so simplified as to impair accuracy of statement. His use of the case method, his presentation of the same factor in the life of the adolescent from many different angles, and his placing the adolescent in his historical setting, give distinction to Averill's text.

C. N. J.

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